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*with the compl. of
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ADDRESS

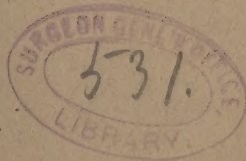
ON

MORBID ANATOMY.

BY

J. B. S. JACKSON, M.D.

MAY 25, 1853.



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ON
MORBID ANATOMY,

DELIVERED BEFORE

THE MASSACHUSETTS MEDICAL SOCIETY,

AT THEIR

ANNUAL MEETING, MAY 25, 1853.

BY

J. B. S. JACKSON, M.D.

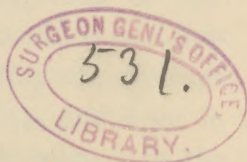
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MORBID ANATOMY.

MR. PRESIDENT AND GENTLEMEN, —

MORBID ANATOMY has now, for many years past, received a large share of attention in every country where medical science can be said to exist; and I have thought, without any feeling of partiality, that its claims to such distinction might be worthy of consideration upon the present occasion.

The general practitioner may well ask, and still more may the public, why post-mortem examinations should be made. They require much time, and often when we can but ill afford it. They are often very fatiguing. They are sometimes dangerous to life. And still further, the idea is one from which our feelings naturally shrink; however wanting some persons would seem to be in all such feeling, and even in the common sense of decency which belongs to the occasion. There are some who can never make up their minds to allow an examination of their deceased

friends; and, when such is the fact, we should not press them with our solicitations, though the "case" may be never so "interesting." But, on the other hand, as the friends often desire to have an autopsy made, and at the same time feel a reluctance to allude to the subject, it is perhaps best, that we should, in every case, on their account as well as our own, so far refer to it as to enable them to express their wishes; and, on the other hand, to give us whatever chance there may be of making the examination; for I maintain that examinations should always be made if possible.

They should be made, because they give a precision to our knowledge of disease that we do not obtain from the study of symptoms alone. They lay a surer foundation for medical science than these last. They show us, as it were, a stamp set upon the organs, and which seems to indicate something of the nature of disease. We feel satisfied that we have made a step forward, and upon sure ground. Sometimes we do not wait for the autopsy, but take this step upon the living body; and, though the idea to which I refer seems at first sight rather startling, it may be perfectly justifiable, I think, in some cases of external disease and of questionable diagnosis. The old observers often drew the most perfect picture of disease as manifested in the living body; but it was too often a dissolving view. It wanted the substantial reality that would have been given by a knowledge of the physical as well as the physiological changes that were going on within the body. Disease was not localized, but

organic were confounded with mere functional affections; and symptoms were grouped together with but little variation, when they were, in fact, referrible to a variety of internal organic lesions. In illustration, we have the case of dropsy, of asthma, and of some forms of fever; the disease now, in such cases, often receiving its name from the structural changes that are found on dissection. Thus, in the case of dropsy, we speak of disease of the heart, of granulated liver, or of Bright's disease; and, instead of dropsy of the brain, a child now dies of tubercular meningitis. The term asthma has been applied to such a variety of affections of the lungs, and even of the heart, that some are half disposed to do away with it altogether. As to the class of fevers, one of the most valuable discoveries that has ever been made in medical science, of late years, is, that in typhoid fever, commonly so called, there exists very generally, if not always, a certain affection of Peyer's glands. I shall speak presently of the relationship of the morbid appearances and the symptoms. Suffice it to say here, that the appearances so far characterize the disease, that we generally say that it had existed when they give us positive evidence, and without reference to the symptoms that may have existed during life. If, for instance, we find the affection of Peyer's glands just referred to, we say that the patient had typhoid fever, whatever the diagnosis may have been. How many diseases have been shown to be confounded with tubercular consumption! as, for example, bronchitis, pneumonia, gangrene of the lungs, or pleurisy; and any one of which

may have, from the first, the characters of a chronic affection. Many years ago, and before the introduction of auscultation, the physician in attendance at the Alms-house in this city remarked, in a clinical lecture on consumption, that, though he could not account for the fact, he had often observed, that, where there was an abundant expectoration of purulent and fœtid matter, the patients generally got well. Now, those cases, we may be pretty sure, were cases of gangrene of the lungs; and, by the aid of our dissections, we have come to be about as familiar with this disease as with consumption itself. By the aid of physical signs also, we are now familiar with it upon the living body; and, as the prognosis above given may seem to have been altogether too favorable, I would say that it is not more so than many amongst us would give at the present day, whatever may be thought of it elsewhere. Symptoms must be studied, so far as they go; and, if the ancients did not connect them with structural changes, it is not by any means certain that they did not appreciate the value of these last.

It is not by the study of symptoms alone, nor of morbid anatomy alone, that the science of medicine is to be advanced to the highest state of perfection of which it is capable. They must be studied in connection, in the sick chamber and in the dead room. As physiology is to healthy anatomy, so is pathology to morbid anatomy. Indeed, the relationship between these two last is such that many persons seem to have a vague idea that the terms are synonymous. This, however, is far from being the case, and a proper dis-

tion should be made. As physiology teaches the laws of life, and a knowledge of it is to be obtained by a study of the healthy functions and organs; so, on the other hand, pathology, which teaches the laws of disease, is the science above referred to, and must be studied upon the functions and upon the organs in a state of disease. It is a great point to ascertain the laws of disease by an observation of its phenomena; and it would be well for science if we should know where to stop in our pathological investigations. The tendency, however, to theorize is so strong, that we are constantly liable to be led away into dark and unknown regions, where we lose ourselves, and but few are inclined to follow us; few, at least, who can afford us the light and support we need. We should keep upon the open track, see our way before us, and pursue it steadily. Certainly there are many points in pathology, as in every other science, that we would wish very much to determine; but if they are, in the nature of the case, fairly beyond our reach, it becomes us to know it. To show the futility of this kind of inquiry, we have only to compare together upon such points the opinions of authors of the highest reputation, of those who are equally learned, equally gifted by nature as observers, and equally desirous of the truth; and we shall often find the greatest diversity; and not merely upon some of the difficult questions in pathology, but upon some that would seem to be of comparatively easy solution. How much preliminary knowledge is to be acquired, before we can investigate, with any chance of success, many of the abstruse questions that

are often agitated! How much do we know of physiology and of general anatomy beyond what the plain observation of facts teaches us? Now, if we cannot understand the healthy processes, how can we expect to know any thing of the mode of action by which the various structural changes are induced, or by which the natural functions are disturbed? I have enlarged upon this tendency to theorize in matters of pathology, because it is not confined to the medical philosopher, but is carried by the general practitioner to the bedside, where it conjures up bugbears that are often more difficult to contend against than the enemy itself.

Anatomical appearances vary more or less, and it is sometimes impossible to decide, upon their evidence alone, as to the disease that had existed; but, more frequently, mistakes are owing to inattention. Softening of the brain, for instance, is not always very obvious at first sight, and yet it would betray ignorance or inattention to overlook it. How was it that so marked a structural change as Bright's disease, or the characteristic lesion of typhoid fever, should have been so long unobserved? Simply because the organs could not have been thoroughly examined. A few years ago, I remember to have seen a tumor that had been removed, and that showed upon incision a yellowish disorganized appearance that led many who examined it to regard it as a tubercular affection. Upon further examination, however, a narrow border of greyish encephaloid was found about the opaque deposit, which last then was nothing more than the tuber-

culoid substance so frequently found in cancerous growths, and which happened in this case to exist in an unusually large proportion.

When the gross morbid changes fail us, have we any further means of determining the character of disease? We have, to a certain extent, in the microscope. This instrument, though its application to pathological investigations is only of comparatively recent date, has come now to be so generally used that a knowledge of its powers may be considered as indispensable. And when we see the striking and often beautiful appearances it exhibits, we cannot but feel that they must have an important signification; and that they must bring us nearer to the source of disease than a mere examination of the gross structural changes, as the last bring us nearer to it than the symptoms. Much, undoubtedly, has been done; and, from what we know of the capabilities of the instrument, it is impossible to say what is yet to be the extent of its revelations. In the present state of science, however, its results, in regard to the determination of morbid structures, should be received, it seems to me, with caution. It requires, I am sure, a great deal of practice before one can become accustomed to seeing with his powers of vision increased several hundred-fold. A great deal of time also is required for these examinations, when one has become skilled in the use of the instrument; and it is not every one whose eyes will endure it. In order to settle a negative, it is not always enough to take a few specimens here and there from a diseased mass; the examination

must be thorough, and I have known hours to be spent in a single investigation. I have already referred to the case of an encephaloid tumor that was mistaken for tubercular disease; and I would say that the microscopists here were as much at fault as those who judged by the gross appearances, having taken only the central portion for examination, and overlooked that which surrounded it, and which essentially characterized the disease. Much has already been done that will require to be undone, and even by those most skilled in the use of the instrument.

The above remarks are strikingly illustrated in the case of cancer; a disease for which, of all others, we should wish to have, if possible, some certain test. The gross anatomical appearances too often leave us in the dark. But here, it was said, was a new mode of observation by which we might decide whether a structure was cancerous or not. Cells of a certain specific character were said to exist in growths of this nature, that were not to be found in any other; and this statement, having been made by some of the highest authorities, and abundantly confirmed, it was thought, by further observation, had come to be regarded as an established fact in medical science. It is now found, however, that the character of the cell is far from being so specific as it had been supposed; the form which had been regarded as so peculiar is not a universal, if indeed it is a common, appearance; and, on the whole, I doubt if we could, in a given number of cases of questionable cancerous disease, and in the present state of microscopical science, come

much nearer to the truth with the aid of the instrument, than we could without it.

The microscope, again, shows that some structures are not strictly cancerous, though they may appear to be so to the naked eye; and, in the case of a tumor removed by a surgical operation, the observation is received as very encouraging in regard to prognosis. It is well to establish the scientific difference; but there is only this difference practically,—that true cancer generally destroys life by attacking the internal organs; whereas the diseases in question effect the same object locally, returning sooner or later in the part or near it, however thorough the extirpation may have been. I do not refer so much to epithelial cancer, the tendency of which, as it affects the lip, skin, and other external parts, is sufficiently well known; but to what has been described, I think, as the local recurrent cancer, and which, I fear, the microscopists not very unfrequently mistake for a non-malignant disease, as it would have been formerly called.

The character of the tubercular deposit is another subject to which the microscope has been especially directed; and it has often enough been asserted, if it is not yet generally believed, that its character is specific. But this again is getting to be a disputed point; a very eminent morbid anatomist and pathologist saying to me, not two years ago, that in his opinion the tubercular corpuscle was nothing more than a shrivelled-up pus-cell. The disease also has been generally regarded as something *sui generis* by those who observed only its gross anatomical characters and

its general pathological history. I have, however, long been disposed to consider it as a form of inflammation; and the microscopic characters would now, I think, rather confirm that view of it, as tending to show the alliance of the tubercular deposit to the product of inflammation. I would say that the appearances, in the case of pneumonia and of one of the forms of tubercular disease of the lung, are sometimes so similar, if we examine the organ only to a limited extent, that it would be impossible to distinguish the one disease from the other. Secondly, I have seen a strongly marked case, to show that an extensive tubercular deposit in the lung might be absorbed, as the inflammatory deposit must be in the case of pneumonia; the existence of the disease was proved by the local and constitutional symptoms, and by the physical signs; and the entire absence of it was proved, when the patient died, two years afterwards, of tubercular disease of the brain. The bronchial glands, however, corresponding to the upper lobe, which was the one that had been diseased, were extensively tubercular; but this fact rather tended to prove the point in question. Thirdly, in the experiments of Baron and Jenner on rabbits, upon the absorption of the tubercular deposit, there must have been an absorption of some morbid deposit; and if the microscope shows that the granulations probably did not contain the characteristic corpuscle, and were therefore not to be regarded as proper tubercles, still I cannot but think that they were closely allied pathologically to this form of disease. I should be disposed to say further that all

the different forms of tubercular disease of the lungs are essentially the same, however much they may differ in their gross anatomical appearances ; the product we see is the result of inflammation, modified by some morbid state of the part affected or of the system ; and it may be absorbed in an early stage of the disease, if the general health is improved ; or it may go on to suppuration, and even then show occasionally a tendency to recovery that would ally it to the process of inflammation. I have digressed thus fully upon the subject of tubercle, because its microscopic characters have been particularly studied ; and, as at present received, tend to confirm, as I have already said, the views I have long entertained of the disease, and which certainly have differed considerably from those generally adopted.

The study of morbid anatomy establishes the distinction between functional and organic affections ; or disorders and diseases, as they have been called. Some persons seem hardly to realize the amount of functional disturbance that may take place independently of structural change ; and yet there are familiar and striking examples enough, as in the case of hysteria and neuralgia. The class of neuroses are essentially unaccompanied by any characteristic lesion ; and, though appearances may be found which are the result of disturbed function, or which are no more than complications, there is nothing constant and characteristic. The nervous system seems to be, if any one is, the direct medium of communication with the vital principle ; and it may, by its mere derangement, exhaust

the patient by keeping up a long-continued irritation of some one important organ ; or it may be more or less general, as in the case of tetanus, hydrophobia, epilepsy, the convulsions of children, &c. We must learn what morbid anatomy will not do, as well as what it will do. Again, as the most grave symptoms may exist without organic disease, so, when this last does exist, death may occur suddenly, and nothing be found on dissection more than what had evidently existed for a long time ; as in the case of disease of the heart.

In this place the operation of physical and chemical causes, in the production of disease, might be considered. The humoral pathology of former times might be alluded to, which fell through, as a mere hypothesis, but has been again raised, and now stands upon a more sure foundation.

As the study of morbid anatomy shows the localization of disease, when it is characterized by anatomical changes ; so, from the study of these changes in a succession of cases, we learn the tendency of disease, whether to recovery or to death ; its natural history, so to speak. This is illustrated in the case of simple inflammation and of cancer : we recognize the disease when it exists, judge of its duration, and look forward to the different stages through which it would have passed. The structural changes are as significant to the pathologist as the natural organs and tissues are to the comparative anatomist. Another striking example is that of tubercular disease, of which I have already spoken, and which is not very unfrequently

met with in different stages of arrest. Phthisis has been generally regarded as an almost necessarily fatal disease ; and, if it is now looked upon in a more favorable light, it is due mainly to the revelations of morbid anatomy.

The adaptation of the organs to the functions they are to perform, as displayed in a comparative survey of man and the lower animals, is a favorite idea with the moral philosopher as well as the physiologist; and the treatises that have illustrated it are full of the most satisfactory and interesting proofs of design. Yet in what respect is the evidence of design more marked in the healthy system than it is in what we witness every day in the case of disease, from the mildest to the most severe form? A thorn in the flesh gives rise to a process of suppuration, by which it is finally expelled ; or, in another case, a foreign body is buried in the deep-seated parts, perhaps in the internal organs, and it may there become surrounded by a thick, insensible membrane, within which it may ever after remain perfectly harmless. The tendency of abscesses towards the surface of the body, or, when situated internally, towards some natural outlet ; the adhesions that are formed, with thickening of the tissues, to prevent an opening into the serous cavities, or to limit the inflammation if an opening does take place ; the adhesions formed about a chronic ulcer of the stomach ; the means used to arrest hemorrhage ; the processes by which a dead part is safely separated from the living, — these are a few instances of the exercise of a power that we may find manifested in every part of the sys-

tem ; and it is perhaps never more apparent than in the efforts to arrest the progress of a disease that must ultimately prove fatal.

Occasionally, this power is exercised without any external manifestations ; and the disease is then said to have been latent. The animal functions are not disturbed, though nature feels the danger. Thus a patient, apparently in good health, dies suddenly from peritonitis ; and, on dissection, we may find that a chronic ulcer of the stomach has perforated ; the parietes of the organ have been destroyed ; and death must have occurred long ago, had it not been for the adhesions that had taken place. Latency in this case is certainly quite exceptional, but then it is sometimes observed ; the death being the result of the accidental, rather than of the primary disease. The consequences of a neglect on the part of nature to attend to these precautions is sometimes strikingly shown. A small tubercular cavity, for instance, may happen to form near the surface of the lung in the early stages of phthisis ; and, if the usual adhesions have not formed over it, it may burst into the pleural cavity, and destroy the patient at once, whereas he might otherwise have lived for months : one of the first cases of pneumothorax that I ever saw was an example of this. In the ulceration that occurs in typhoid fever, such adhesions do not take place, and probably for some very good reason : the consequences, however, that now and then follow, we know but too well.

Sometimes nature seems to overreach herself in these efforts. The means she uses are disproportioned to

the object to be effected, and cost too much: they are intended to be ultimately restorative or protective, but they have come essentially to constitute the disease; and all the danger of the case, if there be any, depends upon them. Perhaps no more striking illustration of this remark could be found than in the case of tymphlo-enteritis, so called. A foreign body gets into the appendix cæci, or a calculus forms in it; and there it may remain for a long while, perfectly quiescent. This little offset to the intestine, which is almost peculiar to man amongst the mammalia, seems to be of no especial use; and, so far as we can see, the foreign body might as well remain there as not. Sometimes, however, nature seems to be seized, as it were, with a fit of capricious intolerance, and a determination to get rid of the offending cause, if so it can be called when it had been borne with so long and so patiently; and, to effect this object, a train of processes is then set up, which, however, interesting to the pathologist, are but too certainly fatal to the subject of them. The case of inflammation of the serous membranes may also be mentioned: a moderate effusion might relieve it, when a larger amount would perhaps compress the organs so as to destroy life.

Morbid anatomy may be studied with great advantage upon the lower animals. The powers of nature in the restoration of injured parts are often wonderfully well shown; and it is not much to the credit of human therapeutics to find how well they often bear up under disease; though it is true that the power of endurance may be greater in them than it is in man.

Endurance, however, has not much to do with the union of a broken bone ; and certainly the most regular unions are sometimes met with in the lower animals. There are those who seem to feel that the study of comparative pathology is rather beneath their dignity ; but, if such a feeling should arise, let them think of the origin of vaccination, and of what that alone has done for mankind. Truth is sacred, and we never need feel ashamed to receive it, from whatever source it may come : disease should be studied in the lower animals, and still further in the vegetable world. A curious subject of investigation, that may be alluded to here, is the analogy that exists between some of the morbid conditions in man and the normal condition of the same parts in the lower animals : the idea has been ingeniously developed by a German writer, and his work contains many striking illustrations.

Supposing, now, that the structural change represents the disease, how are we to recognize its presence in the living body, or the absence of it in mere functional affections ? We must transfer to the sick-chamber the knowledge we get in the dead-room. Autopsies are very interesting scientifically ; but they will not be generally made, nor their results read, and still less will the public permit them, unless it can be shown that they are practically useful. The morbid changes must be connected with the symptoms and physical signs manifested during life ; so that, having the one given, the other may be inferred. We thus acquire the means of diagnosis, so far as it can be done. Diagnosis, above all other things, characterizes

scientific medicine; and the public, as well as the practitioner, appreciate the value of it. A patient wishes to be told, and in a manner that shall command his confidence, what ails him; if he will get well or not, and how long he will be sick; and this quite independently of treatment. As I heard it remarked lately, if physicians did nothing more than to answer such calls, the profession would still be supported.

The diagnosis of disease will become positive by the above mode of investigation, so far as it is possible; and yet, after all, there is a very great uncertainty in deducing the existence of organic lesions from the symptoms. As we may have functional disturbance without structural change, so the reverse is not unfrequently met with; and there is no organ perhaps that is not more or less subject to these latent affections. I have already referred to the latency of disease; it may be entire, or there may be constitutional without any local symptoms; it may exist in any degree, and may be quite marked where there is extensive organic disease; it is not confined to chronic cases, but is sometimes met with in the most acute inflammatory affections. Peritonitis, for instance, is generally supposed to be a well-characterized disease; but I have seen several dissections where it was entirely overlooked during life, though the cases occurred in the practice of some of our best observers. On the other hand, we are sometimes overpowered with symptoms; they are out of all proportion to any organic change that may exist; and it is difficult to say whether this case or the first requires the greater power of discrimi-

nation. To meet these cases, the mind must be well trained to observation; and the focus of medical vision arranged so that we may see in an imperfect light, and not be blinded when there is too much.

Physical signs, when they exist in a positive form, are perhaps more to be depended upon than symptoms as diagnostic of internal organic disease. The whole science of physical signs has, in fact, grown out of that of morbid anatomy. We do not see the structural changes as we do in the dead body; but we have the evidence of other senses of their existence, and sometimes almost equally positive. This is especially true of some of the thoracic affections. In the abdomen also there are various organic diseases, of which we have pretty satisfactory physical evidence, though the diagnosis of tumors in this region has generally been thought obscure. We are now, however, better acquainted than formerly with uterine and ovarian tumors, cancer of the stomach, cancer of the liver, &c.; and we are therefore able, in many cases, to recognize upon the living body the physical characters with which we have become familiar in our dissections. On the contrary, a certain disease of the liver often induces ascites: now, we know from dissections, that the organ in this case is generally smaller than natural: if, therefore, it should be felt in this form of dropsy, and still more if it were felt to be enlarged, it would be a reason, negatively, why this disease of the liver should be declared not to exist. Further, if, under the same circumstances, the spleen should be enlarged, it would be a reason for diagnosing the

particular disease of the liver here referred to, inasmuch as obstruction of the portal system tends very naturally to produce a congestion, and, at last, a permanent enlargement of the spleen; as, on the other hand, it explains the serous accumulation in the peritoneal cavity. Here, then, a disease of one organ is diagnosed in part by the enlargement of another. Physical signs, however, sometimes lead us astray, as in the case of the various murmurs heard over the heart and large blood-vessels in nervous subjects. In an emaciated subject, the head of the pancreas, and even the bodies of the lumbar vertebræ, may be mistaken for a tumor; and, upon two different occasions, at a post-mortem examination, I have felt a small but very distinct tumor before opening the body, which proved to be the pylorus in a perfectly healthy condition. A woman once consulted me for something that she said was growing in her throat, and which she had felt with her finger: it was the epiglottis.

Physical signs are, of course, explained directly, by the changes that take place in the internal organs, and according to physical laws. But what is the relation of these changes to the symptoms of disease? The explanation here again is sometimes physical, and so far satisfactory. That beautiful optical instrument, the eye, is rendered as useless by any cause that intercepts the rays of light, as a microscope would be with its diaphragm closed; and so of some of the other special senses. In the case of thoracic disease, numerous examples might be found; the healthy performance of the functions in this part of the body

being so far dependant, more or less directly, upon the operation of mechanical laws. The lungs, for instance, are compressed by pleural effusion, and dyspnœa must ensue; or the air-vesicles are over-distended, and the same effect is produced. In the one case, the air cannot be got into the lungs; and, in the other, it cannot be got out of them. The diseases of the larynx, acute and chronic, also afford striking examples. In valvular disease of the heart, the circulation throughout the whole system is liable to be more or less obstructed; the organs labor in the performance of their functions, and the vessels often strive to relieve themselves by a discharge of the watery parts of the blood; or they may even give way, and pour out the blood itself. Obstructive disease of the alimentary canal, or of the excretory ducts, the pressure of morbid growths on the surrounding parts, &c., may be alluded to; in a word, there is hardly an organ from which illustrative cases might not be taken. The weight of a diseased organ is an important element, and one that has not been sufficiently regarded; the lungs, for instance, become sometimes very heavy in pneumonia, and also in tubercular disease; the liver may increase in weight three or four fold; and an encysted ovary, or a collection of fibrous tumors developed in and about the uterus, may, it is known, almost equal the weight of the patient herself.

If many of the symptoms of disease can be explained physically by the structural changes, still more must be referred physiologically to the derangement of function that is induced. A machine that is out of

order does not generally work well, and so it is with the animal machine. Now, the different organs and tissues of the body have different degrees and kinds of sensibility; and so the symptoms vary. The sensations experienced under an attack of bronchitis, pneumonia, pleurisy, or pleurodynia, for instance, will be very differently expressed; and the only explanation that we can give is the one above referred to. The disturbance of the functions is generally more or less marked in acute inflammation of the internal organs, and is certainly not to be explained by any other than vital laws, — as in inflammation of the brain, of the stomach, or of the kidneys. And, if such is the explanation of the local symptoms, still more must it be of the constitutional, and of the special disturbances in remote parts of the system. How, for instance, irritation of the stomach is induced by disease of the brain, or by the passage of a calculus down the ureter, is more than we know; and we only cover our ignorance by saying that it is from sympathy: nor can we say how general febrile symptoms are excited by local inflammation. We are, perhaps, too much disposed to explain the symptoms by structural changes, when these last should often be regarded as only the anatomical character of the disease. It is often asked whether the affection of Peyer's glands is the cause of typhoid fever: certainly it is not, any more than an exanthematous eruption is the cause of the fever that attends it, however it may produce some of the secondary symptoms. The inflammation of the lungs in pneumonia is generally regarded as the cause of the

constitutional symptoms; and yet I am sure that I have seen cases where these last had preceded the local disease, as shown negatively by physical signs and by symptoms.

If it is asked what has morbid anatomy done for the treatment of disease, I would refer to what has already been said upon the subject of diagnosis, and upon which all sound treatment should be based. If a machine is to be put into working order, we must first know where and how it is out of order; and we must know too when it is beyond repair. Treatment is empirical or rational. By the first, as we learn by experience, we may sometimes do much good; and, though we cannot explain the operation of the means we employ, we are bound to use them, if we are sure of their efficacy: this is very properly called rational empiricism. The true, rational method, however, should of course be adopted, so far as it goes. If one localizes the disease he is to treat, and knows the course it will probably take, he proceeds understandingly, removes the obstacles to recovery, follows the guidance of nature, and trusts mainly to her efforts and resources: he knows when to interfere, and when to let alone. The difference between the scientific practitioner and the empiric, regular or irregular, is never better seen than in the treatment of incurable disease; where the one desists from all active measures that have not some definite object, whilst the other harasses his patient to the last with worse than useless experiments.

In the study of morbid anatomy, there is some cause

for apprehension that its importance may be over-estimated; that we may think too much of the physical effects of disease, and not sufficiently discriminate between the different states of the system under which they are produced. We know, for instance, that certain forms of external inflammation yield to a mode of treatment which in others would only aggravate the disease; and so it would seem to be with some internal affections. Puerperal peritonitis, for instance, may require active depletion in the sporadic form; and the very opposite course, of tonics, when epidemic.

Morbid anatomy has so far been considered in its relation to pathology; but it is interesting, in another point of view, to the philosophical anatomist. Structures are developed under disease that we know to exist in the lower animals, and infer in man from the functions performed, but which we cannot detect in the healthy state of the organs. A striking illustration of this remark I once met with in the case of the gall-bladder, a muscular coat being developed in it that to the naked eye was quite as distinct as it would have been in the intestine; and this development took place in consideration of the general law in morbid anatomy, that, when a mucous membrane is inflamed, the muscular coat external to it tends to hypertrophy: in this case, the mucous membrane was in a state of intense acute inflammation, and the cavity of the organ was filled with pus. The muscular coat is palpable enough in the intestine and in the trachea, but in the case of inflammation it becomes still more so: in the

trachea, however, this result may be owing to the effort made in coughing and expectoration. Another very striking example of muscular development is to be found in the case of the uterus: this structure, which, in the unimpregnated condition of the organ, is not apparent to the naked eye, becomes sufficiently developed in the gravid state; but I have never perhaps seen it so marked as it has been in some cases of fibrous tumor of the organ of long standing.

An entire organ even may be hypertrophied, and developed in all its parts, as the result indirectly of disease, and directly in consequence of an additional duty that it has to perform. This is a case of simple hypertrophy, and as much so as that of the voluntary muscles, which become so developed by exercise; the cases to which this term is usually applied being generally complicated with structural changes. If one kidney is destroyed, the other is said to enlarge; though I have never seen an instance of it. Hypertrophy of the lung, however, I have more than once seen; and some years ago I met with a very remarkable case of it. A young man died of tubercular disease of the right lung; in infancy he had had some disease upon the left side, which so entirely destroyed the lung that nothing remained, in its place, but a layer of compact cellular tissue, in which the bronchi still ramified to some extent, but in which probably no trace of an air-vesicle had existed for years; the heart lay far back in the left side, by the side of the spine; and the right lung, which was not very extensively diseased, was about double its usual

size; the structure of this last, except for the tubercular affection, being as perfectly normal as the biceps muscle would be in a blacksmith's arm.

As general anatomy is illustrated by an examination of the organs in a state of disease, so is physiology; parts that we may suppose to be essential to a healthy condition of the system being destroyed, and without any manifestation of disturbance during life. The serous cavities that seemed to be so admirably adapted to the constant play of the organs may be obliterated by adhesions; and, in the case of the lungs and heart at least, I think it may be said that the freedom of action seems often to be not at all impaired. One lung or one kidney may be destroyed, and the individual thrive nearly as well as if he had two. The spleen is an organ about which we know very little, physiologically: it may be supposed to be of some use, however, and yet its extirpation upon animals has been rather a favorite experiment, and no very serious consequence has seemed to follow; and so it may become completely atrophied, as the result of disease, with nothing to indicate it during life. I have seen it so reduced in size that it was with difficulty found; and, from its appearance, it must have been in the same condition for a long period before death. The gall-bladder is an organ that exists in some of the mammalia, and not in others; and there is no general physiological law connected with its presence or absence. *A priori*, then, we should not expect any great disturbance of the functions, if it should happen to be cut off from its connection with the liver; and

such is shown to be the fact. The cystic duct may be obliterated by adhesions, and the gall-bladder is then as completely wanting to the individual as if he had been born without one; and yet the functions may be sufficiently well performed, so far as I have been able to ascertain in these cases. Some structural changes, like malformations, seem to be experiments designed by nature for physiological observation.

The method of conducting a post-mortem examination is a point of considerable importance. It should be done with all possible neatness and despatch. It should be done with decency, both in respect to our own deportment, and in regard to the subject of examination also; personal exposure being generally quite as unnecessary and improper in the dead as it is in the living; though I am sorry to say, that, in the examination of the latter, this point is not always regarded as it should be. There is no reason why the body should, in any way, be disfigured; but, on the contrary, it should be left in a better condition to be viewed, in consequence of the examination having been made.

An examination should be made methodically. It does not matter so much what the method is; but all the organs should be examined in every case when possible, and in a way to show best the structural changes if there be any. Parts are sometimes removed in so bungling a manner that very little can be made out afterwards respecting them. I once saw a most distinguished pathologist mistake acute pneumonia for tubercular disease; and he maintained his point obstinately until the different parts were put together in their proper relation, and the disease was shown in its

successive stages ; the two diseases, as above remarked, sometimes resembling each other most strikingly, if, as the mineralogists would say, we take only "hand specimens" for examination. We should trace the origin and progress of disease as well as its seat. We naturally look to the part where it is most advanced ; but on the confines we sometimes see it in the bud ; and it is with these slight variations of structure that we should particularly familiarize ourselves. All the organs should be examined if possible, I say, as appearances are often found that had not been expected ; and the case of our illustrious fellow-citizen, the late Secretary of State, is in point. He died from disease in the abdomen ; and, though there had been cerebral symptoms, they were slight and ill-defined, and had hardly been thought of. The head, however, was examined, and appearances were there found which showed that he had undergone, at some former period, a most severe attack of disease within the cranium.

It may seem hardly necessary to insist upon a knowledge of healthy anatomy, before one undertakes to examine and decide upon the organs in a state of disease ; and yet the most gross mistakes are occasionally made. In medico-legal investigations especially, the liberty and even the life of an individual may be endangered by the incompetence of the person who makes the post-mortem examination. I have known the nerves to be mistaken for the lymphatics, the kidney for the spleen, and that too after a scrutinizing examination, and an ovarian cyst to be described as a urinary bladder. A great deal of anatomy is taught

that seems to be of no use, physiologically or practically; the physical character and relations of the internal organs, and the appearance of the different tissues, being comparatively neglected.

The pseudo-morbid appearances, as they may be called, deserve especial attention, as they often lead to error. There are, I believe, natural variations in the organs as there are in the external parts. They vary, too, according to the age of the subject. They vary according to the character of the disease of which the patient has died; as it is more or less chronic, as the blood is more or less impoverished, and as the vital powers are more or less reduced. They vary according to the mode of death; changes taking place sometimes just previously to or during the act of dying, or even after death, that may be mistaken for disease. Of these changes, congestion is perhaps the most frequent; and so nearly does it sometimes resemble the first stage of inflammation, and especially in the lungs, that I believe it would be impossible for the most skilful anatomist to distinguish the two if taken apart, though it might generally be done if all the circumstances of the case were considered: as the public are deceived by the cadaveric discoloration of the depending parts of the body externally, so we often are ourselves by a corresponding condition of the internal organs. The redness of the stomach sometimes observed in persons dying suddenly during the process of digestion, and first described by Dr. Yelloley, is very important to be noticed; as, considering the circumstances under which it is observed, it might be mistaken for the effects of a corrosive poison.

Redness of Peyer's glands I have also several times noticed under the same circumstances, though the observation has not been confirmed by others, so far as I am aware: the appearance is similar to one that is occasionally met with in various infantile diseases, as in the exanthemata, croup, pneumonia, and convulsions. Cadaveric softening of the stomach by the action of the gastric juice is, to a greater or less extent, an extremely common appearance; and it is very often misunderstood, or mistaken for the effects of disease. The whole subject would seem to have been sufficiently set at rest by Mr. Hunter's original observations, and to have rendered the abundant confirmation they have received since his time unnecessary; and yet many of the continental pathologists seem hardly to realize the true state of the case; the appearance in question having been generally attributed by them, until of late years, to inflammation, and being still so regarded by many at the present day. A few years ago, I saw a stomach that had been removed from a person who was suspected to have been poisoned, and who was disinterred for examination: softening of the mucous membrane was found; and, the nature of it being misunderstood, the discovery did but little towards allaying the excitement that already existed. And here may be mentioned those impostures which nervous females sometimes practise, and which a knowledge of morbid anatomy will enable us to detect.

In concluding my remarks upon the subject of this address, I feel how inadequately I have performed my task, and how much more forcibly the importance of the subject might have been set forth. Medicine is

not one of the exact sciences, and the attempts that have been made to place it in that rank have sufficiently shown its imperfections. There are too many elements at work ; and we must observe their operations, but not undertake to draw the line of action for them too closely. We must be content, then, to take medicine as it is. It has made a great advance towards exactitude of late years ; and I can see no course more likely to carry it forward than the one we are now pursuing, and in which Morbid Anatomy holds so prominent a rank.

Before closing this address, Mr. President, I can but allude generally to those of our members who during the past year have been taken from amongst us ; many of whom were not merely honored by the profession, but most highly esteemed by the community.

I should do great injustice, indeed, to my own feelings, and should be guilty of neglecting a sacred duty that belongs to me, in the position I here occupy, should I pass unnoticed an event that has so recently occurred in this community, and with which the members of our profession were so particularly connected. Of the crowd of human beings who were, on the occasion referred to, so suddenly hurried from life into eternity, three were Fellows of this Society ; and they would probably, except for this melancholy catastrophe, have been with us at this time. They have departed ; but they leave behind them a name to which such a community as the one in which we live will ever do honor ; honor due to them not merely for their high professional attainments, but for what makes

the true man, — their moral worth. Two of our friends were past the meridian of life, but were still actively engaged in professional practice, and with all the advantages of a long course of personal experience; one of the many proofs of the estimation in which they were held being shown in the fact that they were each of them, at the time of their death, President of the Medical Society of the District in which they resided, and were thereby officially Vice-Presidents of the Society at large. One of them, particularly, had been for many years a most active and influential member of this Society, and his loss must be sincerely felt. Their companion was younger in years; but, being highly qualified to gain and to maintain the respect and confidence of the community and the profession, he had already received a large share of public favor; and, if his life had been spared, there is no doubt that he would have held a high rank amongst us. It is not for me, however, to eulogize the dead: those who knew them well have offered such a tribute of respect to their memory as they fully deserve, and as, I am sure, will be most acceptable to the Society. But, whilst we deplore the loss of those who were taken away, we cannot be sufficiently thankful that so many are here met together whose lives were in such jeopardy upon that sad occasion; and with what a fearful chance against them. Especially would we remember those of our associates, who, with three exceptions only, so entirely and miraculously escaped, when death in such an awful form was all about them. Hovering, as it were, upon the verge of eternity; and feeling, during those two or three moments of dreadful suspense, that

amidst the crash and destruction the very gates of another world were opening before them, what must have been their sensations when they found that they had passed safely through the terrible crisis, and that they were once more amongst the living! It must have been a scene which they never can recall without a thrill of horror; but their lives were spared; and, in the name of this Society, I would offer to them our most sincere congratulations, as I would to the friends of the deceased our heartfelt sympathy.*

* This terrible accident occurred on the 6th inst., at 10 o'clock, A.M. The railway train for New Haven had proceeded but forty miles on its way from New York, when it came to an open drawbridge at Norwalk, and was precipitated at once into the river below. As it was going, at the time, at full speed, the consequences may be imagined; but they were too awful to be described. The connection of the medical profession with the accident was owing to the fact that the annual meeting of the National Medical Association had just been held at New York, at which meeting it was estimated that there were present from the New England States not less than sixty or seventy members.

The names of those of our profession who were in the cars at the time of the accident were as follows, so far as I have been able to ascertain them:—

From Massachusetts — Drs. Abel L. Peirson, of Salem; James M. Smith and James H. Gray, of Springfield; Ephraim Buck, J. Mason Warren, and George Bartlett, of Boston; William D. Lamb, of Lawrence; Jonathan W. Bemis, of Charlestown; Joseph Roby, of Newton (Professor of Anatomy at Maryland University); Lemuel Dickerman, of Medfield; Daniel Thompson, of Northampton; and Charles H. Brown, of Ipswich.

From Connecticut — Drs. Archibald Welch, of Hartford; Samuel Beach, of Bridgeport; and Levi Ives, of New Haven.

From New Hampshire — Dr. Josiah Bartlett, of Stratham.

From Maine — Dr. Benson, of Waterville; and Dr. Tallcott.

From the State of New York — Dr. William C. Dwight.

There were also given the names of Drs. Evans, Bissell, Gloss, Nevins, Russell, Romer or Rainer, and George Elizur.

Of the killed, there were Drs. Peirson, Smith, and Gray, of Massachusetts; Welch and Beach, of Connecticut; Bartlett, of New Hampshire; and Dwight, of New York.

Of those who were more or less injured, there were Drs. Bemis, Lamb, Dickerman, and Brown, of Massachusetts; and Ives, of Connecticut: but they are all understood to be doing well.

O B I T U A R Y.

SINCE the last Annual Meeting of this Society, the following members have died:—

Admitted.	NAME.	Residence.	Date of Death.	Age.
1803	WINSHIP, CHARLES W.	Roxbury . . .	Sept. 1852	79
1809	ROBBINS, PETER G. . .	Roxbury . . .	May, 1852	73
1811	NICHOLS, ANDREW . . .	Danvers . . .	March, 1853	70
1812	WELLINGTON, TIMOTHY	West Cambridge	May, 1853	70
1821	PEIRSON, ABEL L. . .	Salem . . .	May 6, 1853	58
1824	CLARK, SHEPARD . . .	Hubbardston .	October, 1852	58
1825	BAKER, GEORGE . . .	Chelsea . . .	Dec. 25, 1852	56
1825	SHED, JOSEPH . . .	Danvers . . .	April, 1853	70
1826	SMITH, SAMUEL . . .	Williamstown .	June, 1852	73
1832	BEMIS, DAVID . . .	Chicopee . . .	October, 1852	54
1832	ATKINSON, JOHN . . .	Newburyport .	August, 1852	53
1835	CLARKE, FRANCIS . . .	Andover . . .	July, 1852	38
1835	PARTRIDGE, WARREN .	Princeton . .	Feb. 1853	55
1839	GLAZIER, AMORY . . .	Fall River . .	1852	69
1841	SMITH, JAMES M. . . .	Springfield . .	May 6, 1853	
1841	SAVERY, PHINEAS . . .	Attleborough .	May 19, 1853	53
1844	STANLY, SELIM A. . . .	Attleborough .	Oct. 18, 1852	43
1844	STEVENS, JUSTIN E. . .	Boston . . .	Dec. 17, 1852	30
1846	CHAPMAN, THOMAS L. .	Springfield . .	1853	
1847	GRAY, JAMES H. . . .	Springfield . .	May 6, 1853	34
1847	WADLEIGH, JOHN B. . .	Haverhill . . .	June 11, 1852	32
1849	BARTLETT, BENJAMIN D.	Lowell . . .	Feb. 1853	63
1849	KING, CHARLES A. . . .	Abington . . .	Dec. 1852	26

ABEL L. PEIRSON, OF SALEM.

Boston, May 23, 1853.

My Dear Sir, — I readily comply with your request that I should give a brief sketch of the life and character of Dr. A. L. Peirson. I must premise that I may do it with a partial hand; for he was a friend to whom I have been warmly attached for forty years.

Dr. Peirson was the son of the late Samuel Peirson, Esq., of Biddeford, Maine. He was born on the 25th of November, 1794, and was therefore in the fifty-ninth year of his age, at the time of his late lamentable decease. He entered our College at Cambridge, as Sophomore in 1809; and accordingly was graduated in 1812, not yet eighteen years old. He then became a pupil of mine to study medicine, and was graduated Doctor of Medicine in the University at Cambridge in 1815. I can testify that he pursued his medical studies with industry and hearty zeal. He did not look to the letter only, but sought out the spirit. Without austerity, he was strictly moral in his course of life, and he acquired the esteem of all to whom he was much known. Before his pupilage was ended, a friendship was formed between us, over which there has never passed a cloud to the day of his death. Our intercourse was always unreserved, and exceedingly pleasant; and I was frequently indebted to him for kindnesses, which I shall always love to remember.

Dr. Peirson entered on the business of his profession in the town of Vassalboro', Maine; but he did not remain there quite a year and a half. His success was as great as he expected, yet he felt that he was in too small a place. He wished also to be near those with whom he might hold useful professional intercourse. Early in 1817, he removed to Salem, where he spent the remainder of his life. He had very respectable relatives, on his mother's side, in that ancient town. Before his removal, or soon after, he became attached to his cousin, Miss Har-

riet Lawrence; and to her he was united in marriage in 1819. He did not obtain a large share of the most lucrative business in Salem; but he was always well employed, and maintained a highly respectable character in his profession. He never ceased to study, and always kept himself well informed as to the useful additions made to medical science. He was among the first to become acquainted with Laennec's method of exploring the chest for the physical signs of its diseases. At the same time, he gave great attention to surgery; and he acquired, very justly, a high reputation in that branch of practice. He was industrious in business, careful in his investigation of the cases to which he was called, skilful and judicious in his treatment of them. He loved his profession, and most especially the opportunities it gave him to exercise his benevolent feelings. He gave his heart to his patient; and, forgetting himself, he thought only of what might aid and comfort the object of his care. For many years he was very much employed in consultations throughout the larger part of Essex County, more especially in surgical cases; and probably he performed more operations in that county, within the last twenty years, than any other man.

Dr. Peirson was an active Fellow of the Massachusetts Medical Society, and for many years was one of its Councillors. Their records will show that he was almost constantly serving on the committees of the Councillors. He was also an active and useful member of the Essex South District Medical Society. He was for some years President of that Society; and he was in that office at the time of his decease. Among his brethren he was highly esteemed, and by many of them much beloved. He was a member of the American Academy of Arts and Sciences, and for several years one of the Consulting Surgeons of the Massachusetts General Hospital; and he was as attentive at the meetings of the one, and to the duties of the other, as if he had resided in the city.

Dr. Peirson was an active and useful citizen, and always

agreeable in private society. He was much interested in every cause which promised benefit to the public, and was always ready with a helping hand. He loved social intercourse. He was joyous, and promoted joy in others, while he encouraged every thing which could elevate and improve the community in which he lived. He was open-hearted and frank, warm and generous in his feelings, and always faithful in his attachments. He was sagacious in discriminating characters, but was more disposed to praise than to condemn others, and was especially ready to give full credit to his brethren who were his competitors for professional rank.

Dr. Peirson's death was sudden, and made so strong an impression on the feelings of the community, that it is needless to recapitulate the particulars respecting it at the present time. The bereavement to his family cannot be stated too strongly. He was tenderly alive to every sensation and every wish of his wife and children. But I forbear to say more of them. His fellow-citizens manifested the warmest sympathy and the deepest sorrow on the melancholy occasion of his death: hence it became necessary to have the funeral solemnities performed in the church where he had been a worshipper. The Rev. Dr. Worcester gave a sermon on the occasion. The church was thronged, and had not room for all who sought admission. The community justly felt that they had lost a true man, who had lived for others, not for himself.

His widow and five children survive him; three sons and two daughters. The oldest son has been several years engaged in the practice of medicine in Salem. His youngest has very nearly completed his education as an engineer at the Scientific School in Cambridge. They all feel that they have lost their best earthly friend; but they all submit, without undue repining, to the will of God.

I am affectionately yours,

JAMES JACKSON.

Dr. J. B. S. Jackson.

JAMES M. SMITH, OF SPRINGFIELD.

Baltimore, May 18, 1853.

My Dear Sir,—I thank you for the interest which you kindly take in what relates to my poor brother, and shall cheerfully comply with Dr. Jackson's request, in furnishing such facts as I possess. My brother and myself have been, as you know, located remotely from each other nearly all our professional lives; and, therefore, professionally, I know less of him than do his other brothers.

Dr. James M. Smith graduated in Medicine, March, 1827, from Jefferson College, Philadelphia, while I was Professor in that Institution. He was the office-pupil, first of my father, and subsequently of myself.

Soon after his graduation, occurred the death of our father; and my brother was then thrown upon his own resources.

He first settled in the town of Westfield, Mass.; and, after the probation which all young physicians toil through, he succeeded in acquiring a respectable practice, and, with it, the respect and confidence of a discerning community.

Soon after settling in Westfield, he married Miss Page, of Massachusetts.

In the autumn of 1839, at my solicitation, my brother came to Baltimore for the purpose of taking charge of my practice, during a considerable period of my absence from the city. On my return, I found him possessing the entire confidence of my patients, as well as their cordial esteem. So favorable and lasting an impression, indeed, did he leave in this community, that his untimely and dreadful death has here created a sensation scarcely less vivid than in the place of his late residence. In this community he was remarkable for conscientious zeal in the acquisition of knowledge, and the application of it for the benefit of his patients. That which does more toward inspiring confi-

dence than any thing else,—his patients soon discovered that he was deeply interested in their safety. After each period of my absence from the city, he restored my practice to me undiminished.

He would have remained in Baltimore, and would undoubtedly have acquired a large and lucrative practice; but the delicate health of his wife, and her earnest desire to be near her relatives in Massachusetts, induced him to return to New England; and, on doing so, he located himself in Springfield. The prestige of a good name, already established in that vicinity, commended him at once to the good offices of that community, and he soon acquired an enviable rank as a practitioner and as a man. At the time of his death he was, I believe, regarded in that town as at the head of his profession.

While my brother was in Baltimore, he furnished to the "American Medical Journal" a paper on Necrosis, the principles advocated in which, were illustrated in several cases appended. He contended for the necessity, at an early period in the progress of the disease, of dividing the periosteum, and often perforating the bone, for the purpose of giving issue to pus, the confinement of which, in the cavity or cancelli of the bone, is the immediate cause of its death and sequestration. His cases presented striking instances of the success of that practice.

While my brother was resident in Baltimore, there occurred a remarkable occasion for the exercise of qualities which mark the judicious and intrepid surgeon. A lad had suffered terrible compound fracture of both thighs by a railroad car. The council of surgeons present were divided in regard to the propriety of amputation. My brother strongly urged the operation, on the ground that speedy death was the inevitable result of the omission of it, and that recovery was the possible issue of the bolder course. He declared his willingness to assume the responsibility of the operation; and the case was placed in his hands. He amputated both thighs in quick succession; and, although

the exhaustion of the patient was extreme, reaction resulted, and the patient recovered. The amputations were performed so high as to be almost equivalent to amputations at the hip-joints; and I regard it as one of the most remarkable cases in the history of amputations.

The subject of the operation is now living, an industrious and useful citizen, although without a vestige of a lower extremity.

With great respect, yours truly,

N. R. SMITH.

G. C. Shattuck, Jun., M.D.

JAMES HARRISON GRAY, OF SPRINGFIELD.

For the following notice the Society is indebted to Mr. David A. Wells, the editor of the "Scientific Annual," and a personal friend of Dr. Gray:—

Dr. GRAY was born at Portsmouth, N.H., in 1819. His father was Harrison Gray, Esq., long a resident of Boston, and a leading partner in the formerly well-known publishing house of Hilliard & Gray. Dr. Gray removed to Boston when he was seven years old, and was for some time a member of the Academy at Exeter, where he completed a preparatory collegiate course, but afterwards relinquished the design of entering college. His medical studies, which were commenced with the late Dr. Henry Tuck, of Barnstable, were afterwards pursued in Boston; and he took his degree in 1840, at the Medical School of Harvard College. Dr. Gray commenced the practice of his profession in Enfield, Mass., in 1842, and remained there until the year 1844, having secured a large country practice, when he removed to Springfield, which became his residence up to the period

of his death. For the last few years, Dr. Gray's general practice in Springfield as a physician and surgeon has been very large; and he had greatly endeared himself to a numerous circle of friends and citizens. As a consulting physician, his services were often called into requisition in the towns on the east of the Connecticut River, in the vicinity of Springfield, perhaps to greater extent than any other physician of that district, especially after the death of Dr. Gridley, of Amherst.

Dr. Gray was a man of great refinement of manners, highly cultivated in his tastes, and most ardently devoted to his profession. He was well read, not only in professional learning, but also in various other branches of literature and science, particularly in chemistry. In 1851, Dr. Gray was elected a member of the American Association for the Advancement of Science. At the time of his death by the catastrophe at Norwalk, Dr. Gray occupied the same seat with Dr. Smith of Springfield, in the immediate vicinity of Drs. Pierson and Bartlett; the four being probably engaged in conversation together. Dr. Gray had left the rear car of the train, and joined the above party, about ten minutes only before the occurrence of the accident.

His age, at the time of his decease, was thirty-four. His family consisted of a wife and four children.

TIMOTHY WELLINGTON, OF WEST CAMBRIDGE.

The following notice of Dr. WELLINGTON was furnished, at my request, by Dr. B. E. Cotting, of Roxbury:—

Dr. Wellington was born at Lexington, of respectable but not wealthy parents, October 8, 1781. Early desirous of an academic education, his youth was passed in self-culture, and in earning the means for further progress. He

entered Harvard University, at an advanced standing, in 1803. Performing there with cheerfulness and alacrity the services then required of beneficiaries, he maintained a respectable position in his class, and graduated in 1806. In his senior year, he was permitted to attend a course on anatomy by Dr. John Warren, on condition of taking care of the lecture-rooms. Becoming deeply interested in these lectures, he abandoned his original intention of studying divinity, and, on leaving College, commenced the study of medicine with Dr. Waterhouse, at the United States Marine Hospital in Charlestown. Subsequently he studied with Dr. John Gorham; at one time having charge, under that gentleman's direction, of the Boston Almshouse; then, as since, a most desirable situation for the faithful student to acquire practical knowledge in all the branches of medical science. During College vacations, he had taught district schools; and he now maintained himself by instructing private classes, while pursuing his professional studies. In 1809 he received the degree of Master of Arts. The same year he took, according to the custom of that period, the degree of Bachelor of Medicine: that of Doctor of Medicine was conferred upon him in 1811. He became a member of the Massachusetts Medical Society in 1812.

In 1809 he commenced practice in West Cambridge, a town not long before formed of the north-western, or Menotomy, precinct of Cambridge. The place was then quite small; and its lucrative business, if any, was included in the extended circuit of Governor Brooks, the leading practitioner in that section of the country. The inhabitants gave him a kindly reception; but it was necessary for him to eke out the first year's scanty subsistence by teaching the village school in the winter season. Nevertheless, he struggled on hopefully; and in a few years his practice embraced the whole town and neighboring villages. Ever active and untiring, through the forty-four years of his practice, he never failed to answer speedily and faithfully any professional summons, however unimportant.

He took a deep interest in all the concerns of the town, contributing his time and energies to its advancement; but he would never consent to public service beyond its limits. He loved the science of agriculture for its own sake, having in youth labored on his paternal acres; and he cheered on its humble followers by precept and example. In the midst of his varied labors and duties, he found time for much reading and study; not confining himself to professional works alone, but making an acquaintance with all standard English writers, and keeping fresh his knowledge of the Latin classics. Very many of the more elaborate works on History he read aloud to his children. Delighting greatly in communicating knowledge, he generously extended a helping hand, and unweariedly gave encouraging assistance, to such as he found striving for a better education; a timely aid, which many now in useful and honorable life gladly acknowledge with heartfelt gratitude. In him the schools and other literary institutions of the place found their most active advocate and firmest supporter. He has left a legacy to the public library of the town. His love for his Alma Mater was ardent and unabating. He defended her with energy and effect when assailed by popular prejudice; and was always to be seen at her anniversaries and festive occasions. He was a staunch advocate, and an active member of the Massachusetts Medical Society. He was Councillor of the Society for more than twenty years, and its Delegate to the American Association on several occasions. He was also the President of the Middlesex District Society.

He wrote but little, and published almost nothing; yet the manuscript volumes of some of his favored medical pupils, of notes of his discourses to them on the whole round of medical subjects, attest the extent and thoroughness of his acquisitions. It is to be regretted that he could never be induced to make more public the results of his ripened experience and accurate observations. Though educated in the old school, he early became an advocate of the expectant method of practice.

Dr. Wellington was twice married. By his first wife he had one son, now a physician of high respectability and in full practice. Two other sons and two daughters, with their mother, also survive him. By careful frugality he accumulated a moderate property, sufficient to continue to his family a respectable competency. He gave freely, but with discrimination; and maintained an unsullied honor in all his dealings. He never ignored the friends of his youth, and held ingratitude in utter abhorrence.

Eminently social in his disposition, happy to the utmost in his family relations, the delight of the young and the old, the appearance of his silvered locks and radiant countenance was the signal for spontaneous gaiety and unreserved sociability.

In the sick chamber, that unaffected sympathy with human suffering and apprehensions, which at once secures the confiding reliance of the afflicted; that gentle kindness of manner, which deprives of their terror the most fearful appliances; that unpretending and unostentatious abandonment of self to the emergencies of the endangered; that cheerful, trusting serenity, which "allures to brighter worlds" when hope faileth, — these, all of these, were his, and gave to his professional visits the highest charm and most potent efficacy.

On Monday, the 2d inst., while preparing to go to New York, as a Delegate to the American Medical Association, he was seized with a severe pain in the left thorax, near the heart. This increased in severity during the night, but abated on the day following. On Wednesday he was able to go out. On Thursday he resumed his professional labors, visiting his patients till late in the evening of that day. At midnight he was awakened by a storm raging without; and, while remarking that it would have been a bad night to have crossed the Sound on the return-passage from New York, he was again seized with the pain in the heart, and almost immediately expired. In the midst of life, he was in death; departing, as he had always wished, before his usefulness had ceased, and without a struggle.

Thus passed away a devout man, pure in heart, and of exemplary life. The community where he dwelt have met with an irreparable loss. The guide and kind adviser of the young, the wise counsellor, the peacemaker, the faithful and enduring friend, the good physician, has been taken from them. That beautiful town will henceforth bear a saddened aspect to its returning children as they cross its borders; and many a tear of heartfelt sorrow will be dropped at the grave of its greatest benefactor, Dr. Wellington.

May 28, 1853.

PETER GILMAN ROBBINS, OF ROXBURY.

A friend of Dr. Robbins has sent the following notice:—

Dr. PETER GILMAN ROBBINS was the son of the Rev. Dr. Chandler Robbins, of Plymouth, Mass., and was born at Plymouth, December 10, 1779. He entered Harvard University; but in 1799, while in the junior year, was deprived of the means of continuing there by the death of his father. He left College, therefore, and went a voyage to Calcutta. On his return from the East, he studied medicine for a time with Dr. Thomas Kittredge, of Andover. In 1808 he commenced the practice of his profession at Lynn, and became a member of the Massachusetts Medical Society in 1809.

In December, 1817, he removed to Roxbury, and there continued to practise, more or less, until the year 1850.

In January, 1850, while on his way to Plymouth, he was severely injured in the hip-joint by a railroad accident. Thus made a cripple, he never fully recovered his previous health; and he died May 18, 1852, aged seventy-three years.

ANDREW NICHOLS, OF NORTH DANVERS.

We are indebted for the following sketch to Dr. Samuel A. Lord, of Danvers:—

ANDREW NICHOLS was born in North Danvers, Mass., on the 22d of November, 1785. He never received a collegiate education; but from his earliest life manifested a mind of strong powers, of great inquisitiveness, and a restless earnestness to know more and more. He knew no idle hours. He had no indolent nor indifferent feelings and habits. He was active, attentive, thoughtful, generous even to a fault, honest, persevering, ardent in his temperament, so that some might have called him impulsive and hasty.

His time and attention were wholly devoted to his business, not merely his practice, which was always large, but to all those collateral branches of science which would interest and aid him in the varied duties of his profession.

He studied medicine principally with the late Dr. Waterhouse, of Cambridge, of whom he always spoke with great respect, and of whose professional zeal he largely partook. After receiving his degree as a medical practitioner, he commenced practice in South Danvers, in 1806, at the early age of twenty-one.

He was one of the early Councillors of the Massachusetts Medical Society, of which he became a member in 1811, and retired in 1846.

He was, for many years, President of the Essex (South) District Medical Society, and was succeeded by the late lamented Dr. Peirson, whose great worth as a man and physician will be spoken of by another.

For thirteen years he was Treasurer of the Essex Agricultural Society, and one of its most valuable members.

In 1833, at the formation of the Essex Natural History Society, more recently styled "the Essex Institute," Dr. Nichols was elected President; which office he held until

his resignation in 1845, and since which time he continued to be an active and valuable member till his death.

He was frequently appointed to places of trust and responsibility in his own town, giving evidence of the great confidence which his fellow-citizens always had in him.

He possessed a strong physical constitution, was of large frame, had a fine head, with a strikingly marked benevolent countenance. He continued in full vigor of mind and body until his last sickness, with which he patiently lingered for several weeks, until the evening of the 30th of March, 1853, when he expired at the age of sixty-seven years.

Such was the more public life of our late friend.

But he possessed other qualities which will far outlive those we have mentioned, in the memory of his friends. He had a power of character, an activity of mind, and a noble and widely known kindness of heart, which will affix a more lasting monument to his memory than all the names and emoluments of earthly honor could do.

He had from the first an extensive practice. He was to very many the beloved physician. Throughout his entire course of practice, he was always prompt and ready at his bidding to the sick-chamber. He started as quickly and willingly for the poor as for the rich. In season and out of season, by day and by night, he gladly went forth to do what he could to alleviate the sufferings of the sick, and to soothe the agonies of the dying. And, despite the slander which many cast upon our profession, I have known him, in these later years, to mourn as a child, at the sick and dying bed, at the sorrows and grief of the afflicted. And it was no false feeling. For he was remarkable for the depth and truth of his feelings. They were so strong, that oftentimes, when duty called him to scenes of suffering, he would gladly have hastened the other way. But he would never flee from duty. He was true and steadfast to his trust even to the end. Many who have known his kindness, and enjoyed his watchful attention in their distressful hours, will fondly and long think of him, and mourn that

his presence and skill can no longer relieve their pains, and heal their sickness.

He loved, almost with a reverential feeling, his profession. He was kind and honorable in all his relations and intercourse with its members, whether young or old. He never harbored resentment nor suspicion, but was ever ready to assist by his counsel, and benefit by his advice.

He grew in his profession. He kept pace with its progress. He studied till he died, that he might know more and better of the intricacies of disease, and be more skilled in the best and most approved methods of treatment.

He may, at times, have been over-confident in the probable success of newly discovered therapeutical agents; but, at all times, he was considerate and cautious. He was not without zeal; but his zeal was generally regulated by an intelligent judgment. He was the author of several articles on medical subjects, which appeared in different medical journals. In 1836 he delivered the Annual Address before the Massachusetts Medical Society, on "Irritation of the Nerves," which was regarded as an able discussion, and is preserved in the printed volumes of the Society.

Botany, both general and medical, was a favorite and absorbing study with him; and it was his delight to withdraw from the trying and frequently fatiguing scenes of the sick-room, and ramble in the fields and forests in search of plants and flowers. He made such recreations his study, and thus attained to that knowledge of botany and natural history which gave him an enviable reputation among scientific men. Many of our most eminent men in these branches of science sent to him for information and instruction; and his name is frequently found connected with some society or organization whose object was the advancement of Natural Science. His mind seemed to be invigorated by such pursuits, and his heart was thus often touched with reverence and wonder; and so from Nature he would look up, and humbly worship the author, the God of its creation. It would be a lengthy but pleasant task to give the full

character of Dr. Nichols in his relations to these studies; but there is not space in any brief sketch.

His example should be studied and imitated by those who would rightly regard the importance and interest of such pursuits. Nature never ceases to instruct the willing mind. The careful and constant study of her varied works will continually open rich fields of inquiry and useful knowledge.

Dr. Nichols was possessed of a large degree of literary taste. He read and thought much. In conversation, especially on a subject of interest to him, he was usually both animated and instructive. He has left behind many printed addresses on a variety of subjects.

In 1811 he delivered an address to the officers and brethren of the Jordan Lodge of Freemasons, in Danvers, of which body he was the first Master. And from the beginning of his connection with them, he held a high and esteemed rank as a worthy and faithful member. In 1831 he wrote and published a poem on the "Spirit of Freemasonry."

In 1819 he delivered an address in his native town on "Temperance and Morality," which was printed, and which, at this day, might again be delivered and read with profit; for it must be doubted whether any great advance has been made in these respects since that time. Dr. Nichols was always warmly interested in whatever would tend to improve the social and moral condition of his fellow-citizens.

In 1852, June 16, at the centennial celebration of the town of Danvers, he took an active part. He wrote a poem, adapted to the occasion, entitled "Danvers," which is published, and contains matter of much interest to all who were interested in that day, or who look upon Danvers as their home and native town. It possessed great merit, and reflected much credit upon its author. All who were present at that time will remember his appearance, and how animated, cheerful, and happy he was.

But we will close our sketch by a brief allusion to his

more private character. Dr. Nichols possessed, what is so rare in many, an unusual sense of personal honor, and self-respect. He was very scrupulous of saying aught against the rights of his fellow-men. He could never wound the feelings or confidence of any one by a miserable and despicable suspicion. No unkind feeling, no slander, no malice, ever reached his heart. This was impossible. No harsh or unkind expressions, or mean insinuations, could escape his lips. He could harbor no resentment. And if ever, in times or scenes of excitement, he lost his natural good temper, it was but for a moment. He would quickly forgive. He would forget, that he, too, might be forgiven. That charity which suffereth long and is kind was his, and seldom failed him through his long life. How many, how many, have been the recipients of it!

A religious character, which is the summit of true greatness, was not wanting in him. When not prevented by the imperative calls of business, he was always in his place at church, and took an active interest in its welfare.

He venerated the truths of his religion. An interesting fact with regard to him was his habit of noticing his birthdays: he would often celebrate them in verse; and, on his very last, he wrote at some length on the probable shortness of his life, and all in a very humble and devotional strain.

But the honored physician, the respected citizen, the kind friend, has gone from us. May his example ever be fresh in our memory; may his good deeds stimulate us to the same; that when we, his brethren, shall go to our rest, we can look back upon lives as well spent as his.

The two following notices were received from Dr. Thaddeus Phelps, Secretary of the Bristol District Medical Society: —

SELIM A. STANLY, M.D., aged forty-three years. Dr. S. was born in Attleborough; practised his profession in Bellingham and Franklin; and finally came back to his old home to die of consumption, Oct. 18, 1852.

PHINEAS SAVERY, M.D., aged fifty-three years. Dr. S. was born in Wareham, and graduated at Brown University in 1824. He practised his profession in Attleborough for twenty-six years, and died of paralysis, much esteemed and universally regretted by a large circle of friends and patients.

The "Boston Medical and Surgical Journal," for June 1, 1853, contains a notice of Dr. Savery; and also one of Dr. Welch, of Hartford, Conn., who was killed, at the time of the accident, at Norwalk.

ERRATA.

Page 32. — The whole number of Delegates from the New England States, who attended the late meeting of the National Medical Association, was 163, according to the report of the proceedings of the meeting, published in the "New York Medical Times" for the present month, June 8.

Page 33. — The name of Dr. Thomas L. Chapman was placed upon the list of deceased members, upon the authority of a physician from his neighborhood. It appears, however, that Dr. Chapman attended the late meeting of the Medical Association at New York as a Delegate.

